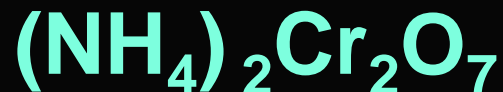


Bell Work

6-Jan-15

Name all of these and give the formula weights (masses)



EQ: Now we have returned to school, what are you going to do differently to improve your learning this semester compared to the past?

Objective:

You will KNOW what a mole is

You will be able to convert from grams to moles

- Know how to calculate molar mass
- Convert between grams and mole

MOLE

The mole is a unit of measurement, like
a ton or a dozen

Ton = 2000 of something

Dozen = 12 of something

1 Mole = 6.02×10^{23} of something



<http://youtu.be/TEI4jeETVmg>

The Mole and Molar Mass

Q: Why don't we simply stick with units like grams, nanograms (ng), kilograms (kg), etc.?

A: Moles give us a consistent method to convert between atoms/molecules and grams



MOLAR MASS

The mass of 1 mole of a compound is called *molar mass*

Molecular Mass (amu) = Molar Mass (grams/ mole)

Molecular Mass of H_2O = 18 a.m.u.

Molar Mass of H_2O = 18 g/mol

MOLAR MASS

**Molecular Mass (amu) = Molar
Mass (grams/ mole)**

Molecular Mass of CO_2 = 44 a.m.u.

Molar Mass of CO_2 = ? g/mol 44g/mol

What are the molar masses of -

NaCl, O_2 , and $\text{Pb}(\text{NO}_3)_2$?

Molar Mass

Molar Mass: The weight in grams of 1 mole of an element.

What the molar mass of oxygen: 15.99g/mol

What about: Cl?

Formula Mass: The weight in grams of 1 mole of a compound.

What is the Formula mass of H₂O: 18g/mol

What about CO₂ and HC₂H₃O₂

MOLES TO GRAMS

Multiply number of moles by molar mass

#mol of Y x molar mass = grams of Y

$$2 \text{ moles H}_2\text{O} \times \frac{18 \text{ g H}_2\text{O}}{1 \text{ mole H}_2\text{O}} = 36 \text{ g H}_2\text{O}$$

PRACTICE

How many grams of the following?

2 moles HCl \rightarrow ? grams HCl (find M.M. HCl first)

3.5 moles $\text{KNO}_3 \rightarrow$? grams KNO_3

2.4 moles lead (II) hydroxide \rightarrow ? grams

Practice

What is the mass of 1 mole (molar mass) of:

- | | | |
|---------------------------|-----------------------------|--------------------|
| 1. H_2 | 2. $\text{Mg}(\text{OH})_2$ | 3. CO_2 |
| 4. NH_4Cl | 5. CuSO_4 | 6. AgNO_3 |

Convert from grams to moles, or moles to grams

- How many moles is 12.5 g of magnesium hydroxide?
- How many moles is 1.46 g of hydrogen gas (H_2)?
- How many grams are in 4.3 moles of ammonium chloride?

Reaction Type Prediction



Lead (II) chloride reacts with lithium sulfate to produce lead (II) sulfate and _____

Carbon tetrahydride reacts with oxygen to produce...?

Nitrogen trihydride reacts with hydrochloric acid to produce ammonium chloride

Home Work

6.Jan.2015

- Have First 18 elements names and symbols memorized
- Be prepared for a Safety Quiz

Period 3



Mai McCrady



Clayton Teague



Jimmy Banh



Raiden Forgach



Simone Pruet



Jayden Frasure



Anna Huss



Katie Shine



Curtis Johnson



Allana Dunbar



Alexandria Favo



Sierra Hejl



John Emery



Izabel Gutierrez



Clay Barry



Michael Malaray



Michael Saldana



Tori Swecker



Brandon Moore



Rhyannon Baxter



Natalia Miranda



Andraya Wilson



Jonah Venglaro



John Ruoff



Morgan Sargent



Jocelyn Zeigler



Jonathan Martin



Adidas Smead



Kaiya Hamamoto



Alicia Miller



Furat Hussein

Bell Work

7-Jan-2015

When Ammonium Chlorate reacts with Nickel (II) Sulfate you get...

Write a balanced chemical equations

What type of rxn is this?

Agenda

Mole Bean lab

Safety Quiz

Objective:

You will **KNOW** how the value of a mole was calculated and what a mole is!!!

Mole Bean Lab

Follow all directions.

The formulas you need are on the bottom of the first page

Return all of the beans to the correct beaker at the stock table when you are finished.

Home Work

Page 196 problem #28

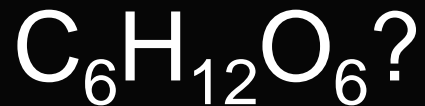
Read 198-203 problems #33-37

Due 8-Jan-15

Bell Work

8-Jan-2014

What is the formula mass of glucose



If you have 40g of glucose, how many moles is that?

Period 1



Kasey Carns



Mikayla Lietz



Ahzariah Lee



Jeshua Durazo



Shelbi Gowin



Hussein Moham



Karena Garcia



Amaris Encinas



Nicholas Sparks



Clarissa Aranza



Britney Mason



No
Photo
Available

Isaac Martin



Isela Camacho



Marissa Harris



Sarah Alfatesh



Ashley Robles



Deanna Gaudett



Tomonari Wilton



Emilee Cray



Lily Alvord



Teylar Larkin



No
Photo
Available

Manuel Gonzalez



Diego Abeytia



Michael Anthon



Demetrius Arch



Katherine Daily



Zachariah Brinsford



Morgan Risch



Karla Gutierrez



Lauren Mendez



Patrick Derrig



Rachel Garcia

Period 2



Benjamin Pelayo



Alexandrine Bro



Anthony Sanchez



Bailey Chwalek



Sovenna Thorn



Iris Navarro



Maisyn Bromley



Cristhian Estrada



Tanner Hejl



Tony Huynh



Kailey Sturgis



Joseph Martine



Anthony Korb



Randall Irby



Emily Cope



Chelsea Kruege



Zane Caramella



Autumn Holstor



Caleb Carpenter



Troy Mosley



Jack Cunningham



Hannah Payne



Araceli Ramos



Denise Ware



Kaitlynn Cooper



Alexis Borbon



Laila Lozano



Hunter Guerin



Nathan Leigh



Nolan Beyersdo



Abner Arvizu-Z

EQ: Now we have returned to school, what are you going to do differently to improve your learning this semester compared to the past?

Objective:

You will easily be able to convert between moles, atoms, and grams of a single substance.

- You will know when to use Avogadro's number

EQ: Now we have returned to school, what are you going to do differently to improve your learning this semester compared to the past?

Objective:

You will Practice using ratios in a chemical formulas during mole calculations.

Turn in
9.Jan.15

HW #28, 33-37 p. 196-203

Mole Bean Lab

Molecules, Atom, Grams, and Mole Calculation Practice

In your lab groups you will work out **Every** example stepwise as a team

- each person need to have all of the examples and practice problems w/ all work for credit shown

As a team Write out assigned problems and correct set up to solve on poster paper